



R E M A R K S

Claims 1-10 were rejected under 35 USC 103(a) as unpatentable over Betsch (5,868,110) on the grounds set forth in the Office Action.

The present claimed invention discloses a bearing case attached to a crankcase of an engine for holding a bearing for supporting a crankshaft of the engine. The bearing case includes a bearing holder for holding the bearing. A crankcase mounting section is formed on an outer peripheral surface of the bearing case to be joined to the crankcase. A rib wall is formed in the bearing case on a side of the crankcase and extending between the bearing holder and the crankcase mounting section.

As shown in Figs. 3 to 6 and according to claim 1, a technique concerning bearing case attached to a crank case of an engine is provided for holding a bearing supporting a crankshaft of the engine. The bearing case includes;

- 1) a bearing holder 61 for holding the bearing;
- 2) a crankcase mounting section 62 formed at an outer peripheral portion of the bearing case, and connected with the crankcase, and



3) rib walls 63 which extend between the bearing holder 61 and the crankcase mounting section 62 thereby enabling the rib walls 63 to receive the force of the radius direction received by the crankshaft thereby improving the rigidity of the bearing case. This improved rigidity of the bearing case 7 thereby prevents the distortion of the bearing.

Unlike the present claimed invention, Betsch discloses a bearing supporting structure that comprises a crankcase and a bearing cap. The structure taught by Betsch is unlike the structure in the present claimed invention because Betsch neither discloses or suggests a bearing case as in the present invention. The main bearing 2 of Betsch is divided into two members, a bearing base member 3 and a bearing cover member 4. This allows the crankshaft to be easily inserted therein. Moreover, the bearing cover member 4 in Betsch seems to be the bearing cap. In the present claimed invention, the engine is provided with a bearing case that is independent from the crankcase. The independent bearing case of the present claimed invention obviates the need to divide the bearing into two members.

Furthermore, Unlike the present claimed invention in which rib walls mounted on the bearing case, Betsch teaches rib walls are that are mounted on the crankcase. Additionally, the purpose of the rib walls in the present claimed invention is different than the purpose of the rib walls in Betsch. The rib walls of Betsch are for transmitting the force of the piston to the periphery. However, the rib walls of the present claimed invention improve

the rigidity of the bearing case as well as reducing the weight the bearing case.

Additionally the strength of webs may be increased in order to improve the rigidity of the bearing case, but by doing so, the result is a bearing case with an increased weight. Therefore, in order to increase the strength of the bearing case in the present claimed invention without the additional weight the thin rib walls are formed to extend from the bearing holder adjacent the crankshaft to the crankcase mounting section which is at the outer peripheral portion of the bearing holder.

The Examiner also acknowledges that Betsch does not teach of making the bearing holder and the rest of the crankcase as two pieces to be affixed together as in the present claimed invention, but rather forming the bearing holder and crankcase as one piece. The Examiner claims that this is a design choice. Applicant's respectfully disagree with this contention. As described above, there is a great difference between the structure of the present claimed invention and that of Betsch. Forming the bearing holder and the rest of the crankcase as two pieces to be affixed together is not a choice of design in the present claimed invention. In view of the remarks, forming the bearing holder as claimed in the present invention obviates the need to divide the bearing divided into two members as in Betsch.

Additionally, as described above, one feature of the present claimed invention is in providing the rib walls extending between the bearing holder and the crankcase mounting section. The purpose of this is to improve the rigidity and reduce the weight of a bearing case presupposing the existence of the bearing case which has the above mentioned merit. In other words, the strength of webs may be increased in order to improve the rigidity of the bearing case. However, in doing so, the weight of the bearing case is greatly increased. In order to increase the strength of the bearing case without increasing the weight as in the present claimed invention, thin rib walls are formed to extend from the bearing holder adjacent the crankshaft to the crankcase mounting section which is at the outer peripheral portion of the bearing holder. Such is neither disclosed nor suggested by Betsch.

As discussed above Betsch neither discloses nor suggests a bearing case that is independent from the crankcase. Also Betsch neither discloses nor suggests a bearing that is not divided into two parts for use with an engine. Further more, Betsch neither discloses nor suggests that rib walls be formed on the bearing case. In view of the above remarks it is respectfully submitted the present claimed invention is not unpatentable over Betsch. It is thus further respectfully submitted that the rejection is satisfied and should be withdrawn.




In the event that any further issues remain please telephone attorney for applicant at the below listed telephone number in order to reach agreement to expedite issuance of this application.

Since the present claims set forth the present invention patentably and distinctly, and are not taught by the cited art either taken alone or in combination, this amendment is believed to place this case in condition for allowance and the Examiner is respectfully requested to reconsider the matter, enter this amendment, and to allow all of the claims in this case.

Respectfully submitted,

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CERTIFICATE OF MAILING UNDER 37 CFR SECTION 1.8(a)

I hereby certify that the accompanying Amendment is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Hon. Commissioner of Patents and Trademarks, Washington, D.C. 20231, on October 9, 2002.

Dated: October 9, 2002


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